

AMENDMENTS TO THE CLAIMS

The listing of claims below replaces all prior versions, and listings, of claims:

1 1. (Currently Amended) A method of communicating in a mobile
2 communications system, comprising:
3 detecting that a first mobile station has stopped transmitting traffic
4 containing real-time, interactive data on a first channel portion; ~~and~~
5 multiplexing traffic from a second mobile station on the first channel
6 portion during a period in which the first mobile station is not transmitting traffic; and
7 receiving a request from the first mobile station for re-allocation of the
8 first channel portion, the request indicating that the first mobile station is about to start
9 transmitting traffic,
10 wherein the request contains a coded version of an identifier associated
11 with the first mobile station.

1 2. (Canceled).

1 3. (Currently Amended) The method of claim ~~2~~ 1, further comprising
2 allocating the first channel portion back to the first mobile station in response to the
3 request.

1 4. (Currently Amended) The method of claim ~~[[1]]~~ 14, wherein detecting that
2 the first mobile station has stopped transmitting traffic comprises detecting that the first
3 mobile station has entered a discontinuous transmission mode.

1 5. (Original) The method of claim 4, wherein detecting that the first mobile
2 station has entered discontinuous transmission mode comprises receiving a
3 predetermined message indicating that the mobile station is entering the discontinuous
4 transmission mode.

1 6. (Currently Amended) The method of claim ~~[[1]]~~ 14, wherein multiplexing
2 the second mobile station traffic comprises receiving the second mobile station traffic on
3 a predetermined time slot of a frame, the first channel portion comprising the
4 predetermined time slot.

1 7. (Canceled)

1 8. (Currently Amended) The method of claim ~~7~~ 14, wherein receiving the
2 request comprises receiving a request that is one burst in length.

1 9. (Currently Amended) The method of claim ~~[[8]]~~ 1, wherein receiving the
2 request comprises receiving a request that coincides with traffic from the second mobile
3 station.

1 10. (Currently Amended) The method of claim ~~[[9]]~~ 14, further comprising
2 extracting the request from a combined signal including the request and the traffic from
3 the second mobile station.

1 11. (Original) The method of claim 8, wherein receiving the request comprises
2 receiving a request that is based on an identifier associated with the mobile station.

1 12. (Original) The method of claim 11, wherein the identifier comprises a
2 temporary flow identifier.

1 13. (Currently Amended) ~~The method of claim 11~~ A method of
2 communicating in a mobile communications system, comprising:
3 detecting that a first mobile station has stopped transmitting traffic
4 containing real-time, interactive data on a first channel portion;
5 multiplexing traffic from a second mobile station on the first channel
6 portion during a period in which the first mobile station is not transmitting traffic; and
7 receiving a request from the first mobile station for the channel portion,
8 the request indicating that the first mobile station is about to start transmitting traffic,
9 wherein receiving the request comprises receiving a request that is one
10 burst in length,
11 wherein receiving the request comprises receiving a request that is based
12 on an identifier associated with the mobile station,
13 wherein receiving the request comprises receiving a request that contains a
14 coded version of the identifier, the coded version having a length that is longer than the
15 identifier.

1 14. (Currently Amended) ~~The method of claim 7~~ A method of communicating
2 in a mobile communications system, comprising:
3 detecting that a first mobile station has stopped transmitting traffic
4 containing real-time, interactive data on a first channel portion;
5 multiplexing traffic from a second mobile station on the first channel
6 portion during a period in which the first mobile station is not transmitting traffic; and
7 receiving a request from the first mobile station for the channel portion,
8 the request indicating that the first mobile station is about to start transmitting traffic,
9 wherein receiving the request comprises receiving the request during a
10 period in which the second mobile station is transmitting traffic in the first channel
11 portion.

1 15. (Currently Amended) The method of claim 7 ~~14~~, further comprising
2 sending an assignment message to the first mobile station in response to the request.

1 16. The method of claim 15, wherein sending the assignment message
2 comprises sending a one-burst assignment message.

1 17. (Currently Amended) ~~The method of claim 15~~ A method of
2 communicating in a mobile communications system, comprising:
3 detecting that a first mobile station has stopped transmitting traffic
4 containing real-time, interactive data on a first channel portion;
5 multiplexing traffic from a second mobile station on the first channel
6 portion during a period in which the first mobile station is not transmitting traffic;
7 receiving a request from the first mobile station for the channel portion,
8 the request indicating that the first mobile station is about to start transmitting traffic; and
9 sending an assignment message to the first mobile station,
10 wherein sending the assignment message comprises sending a plural-burst
11 assignment message.

1 18. (Original) The method of claim 1, wherein detecting that the first mobile
2 station has stopped transmitting traffic comprises receiving a General Packet Radio
3 Service SID_FIRST indication.

1 19. (Currently Amended) The method of claim 18, ~~further comprising wherein~~
2 receiving the request comprises receiving a Real-Time Fast Associated Control Channel
3 resource request message from the first mobile station for re-assignment of the first
4 channel portion.

1 20. (Currently Amended) The method of claim 19, further comprising sending
2 a Real-Time Fast Associated Control Channel assignment message to the first mobile
3 station to assign the first channel portion back to the first mobile station.

1 21. (Currently Amended) A system for use in a mobile communications
2 system, comprising:
3 a wireless interface adapted to communicate over a wireless channel
4 portion with a first mobile station; and
5 a controller adapted to detect if the first mobile station has entered into a
6 discontinuous transmission mode and to allocate the wireless channel to another mobile
7 station when the first mobile station is in the discontinuous transmission mode,
8 wherein the controller is adapted to further detect a request from the first
9 mobile station for re-allocation of the channel portion back to the first mobile station, the
10 request containing a coded version of an identifier associated with the first mobile station.

1 22. (Original) The system of claim 21, wherein the wireless channel portion
2 includes a time slot of a frame having plural time slots.

1 23. (Currently Amended) The system of claim ~~24~~ 32, further comprising a
2 multiplexer to receive traffic from the first mobile station when the first mobile station is
3 in an active mode and to receive traffic from the other mobile station when the first
4 mobile station is in the discontinuous transmission mode.

1 24. (Canceled)

1 25. (Currently Amended) The system of claim ~~24~~ 32, wherein the request
2 comprises a request carried in a General Packet Radio Service Real-Time Fast Associated
3 Control Channel.

1 26. (Original) The system of claim 25, wherein the request comprises a Real-
2 Time Fast Associated Control Channel resource request message.

1 27. (Currently Amended) The system of claim ~~24~~ 32, wherein the controller is
2 adapted to further send an assignment message to the first mobile station in response to
3 the request.

1 28. (Currently Amended) The system of claim 24 21, wherein the request has
2 a length of one time slot of a frame.

1 29. (Currently Amended) The system of claim 28 32, wherein the request is
2 based on an identifier associated with the first mobile station.

1 30. (Currently Amended) The system of claim 29, wherein the request
2 contains is a coded version of the identifier associated with the first mobile station.

1 31. (Currently Amended) The system of claim 24 32, wherein the controller
2 comprises request coincides with traffic from the other mobile station, the system further
3 comprising a joint detector to extract the request from a combined message including the
4 request and the traffic from the other mobile station.

1 32. (Currently Amended) ~~The system of claim 24~~ A system for use in a
2 mobile communications system, comprising:
3 a wireless interface adapted to communicate over a wireless channel
4 portion with a first mobile station; and
5 a controller adapted to detect if the first mobile station has entered into a
6 discontinuous transmission mode and to allocate the wireless channel to another mobile
7 station when the first mobile station is in the discontinuous transmission mode,
8 wherein the controller is adapted to detect a request from the first mobile
9 station for re-allocation of the channel portion back to the first mobile station,
10 wherein the controller is adapted to receive the request during at the same
11 time the controller is receiving traffic from the other mobile station.

1 33. (Currently Amended) A mobile station comprising:
2 a detector to detect when the mobile station is entering discontinuous
3 transmission mode;
4 a controller adapted to send an indication to a base station of the
5 discontinuous transmission mode to indicate that a channel portion assigned to the mobile
6 station is idle,
7 the controller adapted to further send a request for re-assignment of the
8 channel portion when the mobile station exits discontinuous mode, wherein the request
9 for re-assignment contains a coded version of an identifier associated with the mobile
10 station.

1 34. (Original) The mobile station of claim 33, wherein the controller is
2 adapted to send the indication according to a General Packet Radio Service protocol.

1 35. (Currently Amended) The mobile station of claim 34, wherein the
2 identifier comprises a mobile station is associated with temporary flow identifier, the
3 request being based on coded version of the temporary flow identifier being longer in
4 length than the temporary flow identifier.

1 36. (Original) The mobile station of claim 35, further comprising a storage
2 unit to store the temporary flow identifier, the mobile station keeping the temporary flow
3 identifier during discontinuous transmission mode.

1 37. (Original) The mobile station of claim 33, wherein the controller is
2 adapted to further receive an assignment message responsive to the request and to
3 transmit traffic on the channel portion after receiving the assignment message.

1 38. (Original) The mobile station of claim 33, wherein the channel portion
2 comprises a time slot of a frame.

1 39. (Currently Amended) A system for use in a mobile communications
2 system, comprising:
3 a wireless interface adapted to communicate over a wireless channel
4 portion with one of a first mobile station and a second mobile station; and
5 a controller adapted to allocate the channel portion to the second mobile
6 station when the first mobile station is silent and to receive a request from the first mobile
7 station for allocation of the channel portion while concurrently receiving traffic from the
8 second mobile station, wherein the received request overlaps the traffic from the second
9 mobile station.

1 40. (Original) The system of claim 39, wherein the channel portion comprises
2 a time slot of a frame having plural time slots.

1 41. (Original) The system of claim 39, wherein the request comprises a
2 General Packet Radio Service Real-Time Fast Associated Control Channel message.

1 ~~44~~ 42. (Canceled)

1 ~~45~~ 43. (Canceled)

1 ~~46~~ 44. (Currently Amended) The article of claim 45, wherein the channel portion
2 comprises a time slot of a frame having plural time slots.

1 ~~47~~ 45. (Currently Amended) ~~The article of claim 45, wherein the instructions~~
2 ~~when executed cause the system to~~ An article comprising at least one storage medium
3 containing instructions for communicating in a mobile communications network, the
4 instructions when executed causing a system to:
5 detect a first mobile station entering discontinuous transmission mode, the
6 first mobile station assigned a channel portion to communicate traffic;
7 multiplex traffic from a second mobile station onto the channel portion
8 during a time period in which the first mobile station is in discontinuous transmission
9 mode;
10 receive a request from the first mobile station for a re-allocation of the
11 channel portion; and
12 receive the request from the first mobile station that overlaps traffic from
13 the second mobile station.

1 ~~48~~ 46. (Currently Amended) A data signal embodied in a carrier wave and
2 comprising instructions for communicating in a mobile communications network, the
3 instructions when executed causing a system to:
4 receive an indication that a first mobile station is entering discontinuous
5 transmission mode;
6 allocate a channel portion assigned to the first mobile station to a second
7 mobile station;
8 receive traffic from the second mobile station during a time period in
9 which the first mobile station is in discontinuous transmission mode;
10 receive a request from the first mobile station for re-allocation of the
11 channel portion, wherein the request contains a coded version of an identifier associated
12 with the first mobile station.

1 47. (New) The method of claim 1, wherein the coded version of the identifier
2 is longer in length than the identifier.

1 48. (New) The method of claim 47, wherein the identifier comprises a
2 temporary flow identifier, and wherein the coded version of the temporary flow identifier
3 is longer in length than the temporary flow identifier.

1 49. (New) The system of claim 21, wherein the coded version of the identifier
2 is longer in length than the identifier.

1 50. (New) The data signal of claim 46, wherein the coded version of the
2 identifier is longer in length than the identifier.

1 51. (New) The mobile station of claim 33, wherein the coded version of the
2 identifier is longer in length than the identifier.

1 52. (New) The system of claim 39, wherein the controller comprises a detector
2 to extract the request from a combined signal including the request and the traffic from
3 the second mobile station.